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managed by Brookhaven Science Associates
for the U.S. Department of Energy

Mr. Brian Jankauskas
New York State Dept. of Environmental Conservation
Division of Environmental Remediation
625 Broadway – 12th Floor
New York, New York 12233-7051

November 9, 2021

Ms. Sharon Hartzell
Federal Facilities Section
U.S. EPA – Region II
290 Broadway – 18th Floor
New York, New York 10007-1866

Dear Mr. Jankauskas and Ms. Hartzell:

**SUBJECT: BROOKHAVEN NATIONAL LABORATORY (BNL) INTERAGENCY
AGREEMENT (IAG) – MONTHLY REPORT FOR OCTOBER 2021**

In accordance with the Interagency Agreement (IAG) for Brookhaven National Laboratory (BNL), enclosed is the Monthly Report for October 2021 covering the Long-term Stewardship (LTS) areas listed below:

- Brookhaven Graphite Research Reactor (BGRR) Surveillance and Maintenance
- High Flux Beam Reactor (HFBR), including the Waste Loading Area (WLA) Surveillance and Maintenance
- Soil and Water Remediation

If you have any questions, please call Gerald Granzen at (631) 344-4089.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Dorsch", written over a horizontal line.

William Dorsch, Manager
Groundwater Protection Group

Enclosure, as stated:

P. Armani, NYSDEC
C. Costello, NYSDOH
D. O'Hehir, NYSDOH
S. Rushford, NYSDOH
A. Rapijko, SCDHS
J. Wanlass, SCDHS
M. Soucie, NYSDOH
D. Pocze, EPA

J. Carter, BHSO
K. Eng, BHSO
F. Fernandez, BHSO
R. Gordon, BHSO
G. Granzen, BHSO
C. Kwok, BHSO
G. Olson, BHSO
C. Polanish, BHSO
J. Remien, BSA
S. Coleman, BSA
R. Howe, BSA
D. Paquette, BSA
V. Racaniello, BSA
A. Engel, BSA
File: GWER 17.1.21

**Brookhaven National Laboratory
Interagency Agreement (IAG) Monthly Report
October 2021
Long Term Stewardship (LTS) Activities**

**BROOKHAVEN GRAPHITE RESEARCH REACTOR (BGRR) SURVEILLANCE AND
MAINTENANCE**

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements

- Conducted routine surveillance and maintenance (S&M) activities.
- Participated in a design review meeting for work on the Building 701 roof to install equipment for the Quantum Network Experiment.

Highlights of any changes to objectives and description of any changes in technical approach

- None.

Key Issues

- None.

Planned Actions for the Next 90 Days

- Continue S&M activities.
- Quarterly inspection of the high bay and former offices and annual inspection of the engineered cap was rescheduled for 11/16/21.

**HIGH FLUX BEAM REACTOR (HFBR) INCLUDING, STACK, GROUNDS, AND WASTE
LOADING AREA (WLA) SURVEILLANCE AND MAINTENANCE**

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements

- BSA and BHSO participated in the weekly stack demolition coordination teleconferences among the contractor, the Army Corps of Engineers (USACE) and DOE's Office of Environmental Management (EM).
- The USACE and contractor briefed the Community Advisory Council (CAC) and Brookhaven Executive Roundtable (BER) on the status of the stack demolition 10/14/21 and 10/27/21, respectively.
- The contractor completed stack area site restoration with hydroseeding.

Highlights of any changes to objectives and description of any changes in technical approach

- None.

Key Issues

- Due to delays with receipt of radiological analytical data from the final status survey, the contractor has delayed submittal of the Closeout Report to the regulators until late November.
- Stack exterior coating abatement liquid waste remains stored on-site.

Planned Actions for the Next 90 Days

- Continue S&M activities.
- Contractor to conduct off-site disposal of the liquid waste generated from the stack exterior coating abatement.
- ORISE to complete their independent verification report for BSA, DOE and USACE review. It will be included as an appendix to the contractors Closeout Report.
- Following BSA, DOE and USACE review and revision, the draft Closeout Report will be submitted to the regulators late-November.

SOIL AND WATER REMEDIATION

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements:

- The IAG monthly teleconference was held 10/7/21 and included updates on HFBR stack post-demolition activities, per- and polyfluoroalkyl substances (PFAS) CAC groundwater update and the upcoming CAC meeting.
- The BER was held 10/27/21 and included updates on PFAS groundwater activities.
- Received NYSDEC/NYSDOH letter 10/26/21 regarding BNL responses to comments on the Five Year Review.
- NYSDEC provided concurrence 10/7/21 on BNL's response to comments on the 2020 Groundwater Status Report. The Report was posted to the BNL website.
- Work continued on the PFAS Time Critical Removal Action (TCRA) groundwater remediation including:
 - The contractor continued field work with the installation of five of the 11 extraction wells, and 18 of the 83 monitoring wells.
 - Contractor continued piping installation of non-potable water pipe associated with the current firehouse treatment system. The piping work continued from Upton Road towards Building 492.
 - Two new carbon vessels for the current firehouse system were installed in Building 492 and associated piping is being connected.
 - Submitted the final signed Action Memorandum to the regulators 10/11/21. The Final Report was also posted to the BNL Teams IAG Documents site.
 - Obtained digging permits for the installation of temporary wells to identify a source of the "western lobe" of high concentration PFAS.
 - Surveying of the 12 newly installed monitoring wells in the southwest portion of the BNL site is being performed. The new sentinel wells are being sampled.

- The North Street East Groundwater Treatment System high level alarm in the injection wells is causing a system shutdown. BNL electrician to assess the problem. In addition, the influent flow meter needs to be replaced.
- The BGRR Sr-90 Groundwater Treatment System extraction well SR-1 is not working. The well drilling contractor will pull the pump and evaluate.
- The BNL Radiological Controls representative survey of the fixed contamination on the building foundations at the former Hazardous Waste Management Facility (HWMF) is 70% complete. The remainder of the survey will be performed following additional vegetation clearing.
- Performed the semi-annual Land Use and Institutional Control inspections.
- The annual sitewide groundwater-level measurements were obtained.

Highlights of any changes to objectives and description of any changes in technical approach

- None.

Key Issues

- The Laboratory continued COVID-Phase 2 operations. The Groundwater Protection Group (GPG) maintained minimal staff working on-site to manage field activities. All other GPG staff continue to work remotely.
- NYSDEC released new proposed guidance 10/5/21 to regulate PFOA, PFOS, and 1,4-dioxane in groundwater and surface water.

Planned Actions for the Next 90 Days

- The Laboratory and GPG will continue COVID-Phase 2 operations.
- The monthly IAG teleconference is scheduled for 11/4/21 and will include updates on the HFBR stack post-demolition cleanup, the upcoming CAC meeting and a groundwater update.
- The CAC meeting is scheduled for 11/10/21 and will include an update on the Five Year Review and groundwater remediation.
- Continue installation of extraction wells, piping, carbon vessels and monitoring wells for the PFAS Source Area Groundwater Remediation Systems.
- Prepare revision of the TCRA PFAS Characterization Report to incorporate data from the additional temporary wells installed during April-November, and editorial comments received from NYSDEC/NYSDOH.
- Continue the installation of temporary wells using the Geoprobe to identify the source of high concentration PFAS segment initially detected along West Princeton Avenue.
- Prepare and submit the Closeout Report for Building 650 demolition to the regulators.
- Following vegetation removal, RadCon to complete the fixed contamination survey on the building foundations at the former HWMF.
- The BNL Water and Sanitary Planning Team is scheduled to meet 11/9/21.